IOWA HIGHWAY RESEARCH BOARD (IHRB)

Minutes of March 25, 2016

Regular Board Members Present

K. Jones
T. Nicholson
S. Okerlund
W. Weiss
R. Stutt
L. Roehl
M. Parizek
T. Wipf

Alternate Board Members Present

C. Poole
B. Braun
P. Mouw
D. Claman
P. Geilenfeldt III

Members with No Representation

D. Miller
K. Mayberry

Secretary – V. Goetz

Visitors

Leighton Christiansen	Iowa Department of Transportation
Akiema Buchanan	Iowa Department of Transportation
Brian Worrel	Iowa Department of Transportation
Francis Todey	Iowa Department of Transportation
Malcom Dawson	Iowa Department of Transportation
Tammy Bailey	Iowa Department of Transportation
Wayne Sunday	Retired, Department of Transportation
Paul Wiegand	SUDAS
Beth Richards	SUDAS
Bora Cetin	Iowa State University
Sunghwan Kim	Iowa State University
Chuck Jahren	Iowa State University
Kasthurira Gopalakrishnan	Iowa State University
David Eash	USBS
Andy Wilson	FHWA
Darla Hugaboom	FHWA
Brian Keierleber	Buchanan, Co

The meeting was held at the Iowa Department of Transportation Ames Complex, Materials East/West Conference Room, on Friday, March 25, 2016. The meeting was called to order at 9:00 a.m. by Chairperson Sarah Okerlund with an initial number of 12 voting members/alternates at the table.

1. Agenda review/modification

2. Motion to approve Minutes from the February 26, 2016 meeting

Motion to Approve by M. Parizek; 2nd T. Wipf
Motion carried with 12 Aye, 0 Nay, 0 Abstaining.

3. Final Presentation: TR-694**,** "Temporary Traffic Control Handbook for Local Agencies", Paul Wiegand, Iowa SUDAS ($50,000).

BACKGROUND
The 2005 "Work Zone Safety" handbook is based on the 2003 edition of the Manual on Uniform Traffic Control Devices (MUTCD). The State of Iowa is currently using the 2009 edition as the state standard.

SUDAS staff has taken on the task to update the 2005 "Work Zone Safety" handbook. A committee of city, county, Iowa DOT, Iowa LTAP, and utility representatives provided feedback on revisions to update the handbook.

OBJECTIVES
Update the 2005 "Work Zone Safety" handbook to a new pocket sized Temporary Traffic Control Handbook. Final handbook has been printed, distributed, and used for training with local agencies.

DISCUSSION
Q. It's been my experience when driving around the state that utility contractors tend to be the worst offenders when it comes to lack of proper work zone set up. Is there a possibility for you or LTAP to get this handbook into their hands?
A. A lot of the Gas, Electrical Contractors go through IMU, Maryann Kincade would be their contact. We have tried to get this handbook out to the local communities and local jurisdictions so they can tell them to follow the handbook when receiving their Right-of-way activity permit.

4. FINAL REPORT: TR-669, *"Statistical Summaries of Selected Iowa Streamflow Data Through September 2013"*, David Eash, U.S. Geological Survey, ($55,750).

BACKGROUND
Statistical summaries of streamflow data collected at 184 streamgages in Iowa are presented in this report. All streamgages included for analysis have at least 10 years of continuous record collected before or through September 2013. This report is an update to two previously published reports that presented statistical summaries of selected Iowa streamflow data through September 1988 and September 1996.

The statistical summaries include (1) monthly and annual flow durations, (2) annual exceedance probabilities of instantaneous peak discharges (flood frequencies), (3) annual exceedance probabilities of high discharges, and (4) annual nonexceedance probabilities of low discharges and seasonal low discharges. Also presented for each streamgage are graphs of the annual mean discharges, mean annual mean discharges, 50-percent annual flow-duration discharges (median flows), harmonic mean flows, mean daily mean discharges, and flow-duration curves. Two sets of statistical summaries are presented for each streamgage, which include (1) long-term statistics for the entire period of streamflow record and (2) recent-term statistics for or during the 30-year period of record from 1984 to 2013. The recent-term statistics are only calculated for streamgages with streamflow records pre-dating the 1984 water year and with at least 10 years of record during 1984–2013. The streamflow statistics in this report are not adjusted for the effects of water use; although some of this water is used consumptively, most of it is returned to the streams.

This report is the final product of a two-year study that began October 1, 2013. In addition to the funding provided for this study by the Iowa Highway Research Board and the Iowa Department of Transportation (TR-669), the project was also funded by the U.S. Army Corps of Engineers and the U.S. Geological Survey. The report was published as an online report on January 4, 2016. The report is available online at http://dx.doi.org/10.3133/ofr20151214. The main body of the report provides a description of the statistics presented for the streamgages and an explanation of the streamgage summaries, also included is a discussion of the USGS streamgage network in Iowa. Individual streamgage summaries are available as links listed in table 1, or all 184 streamgage summaries are available in a zipped file named "Streamgage Summaries."

DISCUSSION

Q. The trend analysis was done not for only every peek discharge but for annual mean discharges too?
A. Yes
Q. When you say the significant trend of that Peak less than 105, does that mean stationary or not?
A. It does mean non-stationary.

Motion to Approve by T. Nicholson; 2nd D. Claman
Motion carried with 12 Aye, 0 Nay, 0 Abstaining.

5. **Progress Report: TR-674** "Otta Seals: An Up-To-Date Review of Literature" Halil Ceylan, Iowa State University.

BACKGROUND

In the early 1960s, a significant portion of the total public road network in Norway was comprised of unpaved gravel roads with low bearing capacity and carrying an Annual Average Daily Traffic (AADT) of 50-500 vehicles. With the arrival of spring thaw period, the roadbed softened and many road sections were passable for vehicles, irrespective of weight.

A bituminous surface treatment, referred to as Otta seal, was eventually developed by the NRRL in 1963 and initial field trials were carried out during 1963-1965 in the Otta Valley, Norway. Although, Otta seal was originally intended to be a temporary bituminous surfacing for unpaved gravel roads with low volume traffic, owing to its good performance, it has been adopted as a surfacing technique for newly constructed and existing asphalt roads for both low and medium traffic situations. From 1965 until 1985,

more than 12,000 km of unpaved roads have been surfaced using the Otta seal method, which constitutes approximately 20% of the total Norwegian paved road network.

DISCUSSION

Q. In the proposal it said it would be up to the TAC to determine how many different aggregate sites or sources are utilized, could you tell us how many aggregate sites there will be?
A. Four or Five different aggregate sites.
Q. Will those only be four or five of the high quality sites?
A. There will be half from low quality and half from high quality aggregate sites.
Q. Would it be only from the two regions of the State, North East and South West?
A. We will be picking from all over the State, this is why the TAC meeting is very important for imput along with surveys. This will give us an idea of what county struggles with the aggregate.

Motion to Approve by W. Weiss; 2nd K. Jones
Motion carried with 12 Aye, 0 Nay, 0 Abstaining.

6. New Business

In recent years we have not had the opportunity to have our Innovative Project call for proposals like we have in the past, where we have provided seed funding for higher risk projects that could lead to new discoveries. My request to the board was to see if we could use the $80,000 that was never spent towards a pooled fund project and the board agreed. We have been negotiating with Iowa State University to develop what we call the Innovative Project Program. The Midwest Transportation Center (MTC) with InTrans also has a goal to promote innovation and implementation. We have come up with a program to use IHRB research dollars and InTrans will provide a matching fund to pool money for innovative project proposals. We have developed a Memorandum of Understanding to pull our resources together to create this program. There will be a small committee set up of IHRB, MTC, DOT and InTrans representatives to outline what the program is going to be and also to review the proposals that do come in.

Motion to Approve by K. Jones; 2nd P. Mouw
Motion carried with 12 Aye, 0 Nay, 0 Abstaining.

Leighton announced that his last day with the Iowa Department of Transportation will be April 25, 2016, he has accepted a position with the US DOT to join the staff at the National Transportation Library as their first Data Curator. A Farwell party will be after the April 22, 2016 IHRB meeting in The Library, everyone is welcome to attend.

7. Adjourn

The next meeting of the Iowa Highway Research Board will be held Friday, May 20, 2016 in the East/West Materials Conference Room at the Iowa DOT. The meeting will begin promptly at 9 a.m.

Vanessa Goetz, IHRB Secretary